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Maryland Classroom

Focused Feedback

by Marcy Emberger

Background: How does feedback help students?

While the purpose of feedback is to improve the quality of students' work, feedback is far more likely to produce the desired effect when it has a few key attributes. Effective feedback is:

- **Corrective in nature**. Students need to understand *what* they are doing correctly and incorrectly. In fact, research shows that simply telling students their answers are right or wrong has a negative effect on achievement; providing students with the correct answers has a moderately positive effect; explaining what is correct and what is incorrect has a greater effect; and allowing students to continue working on a task until successful has the greatest effect.
- **Timely**. In general, the greater the delay between assignment and feedback, the less improvement occurs.
- **Specific to the criteria**. Feedback is most effective when it is specific to the criteria the teacher has targeted (which are derived from the indicators) and describes exactly what the student did or did not learn.

Process: How can I improve the feedback I give?

You must begin with the end in mind. Some call this *backward design,* because, before beginning a unit, you have to:

- target the indicators and clarify their meaning for students;
- create a comprehensive list of knowledge and skills from the indicators;
- define the data collection (student work) throughout a unit of study;
- select appropriate products to be used in the data collection;
- design rubrics that incorporate student input regarding their development and implementation; and
- plan an assessment sequence.

Then, once the assignment is completed, you should provide descriptive feedback and plan for re-teaching based on who "got it" and who didn't. You'll know who got it and who didn't by using rubrics linked to the knowledge and skills specified in the indicators.

Chesapeake Bay Foundation, Karen Noonan Center, Dorchester County
Enjoying a boat trip to explore an offshore island.

Environmental Education See page 8

Practice: What does descriptive feedback look like in an assignment?

Lesson & Indicators

The lesson below is part of an 8th-grade unit on persuasive text and targets the following indicators.

Reading to be Informed (grades 6-8)

- Students recognize instances of propaganda and persuasive techniques.
- Students analyze the structure and features of functional workplace documents – including format, graphics, sequence, and headers – and how authors use these features to achieve their purposes and make information accessible and useable.
- Students identify and trace the development of an author's argument, viewpoint, or perspective in text.

Continued on page 8

National Standards for Family Involvement

by Maria Schaeffer

Thirty years of research prove that family involvement is a powerful influence on student achievement. Children whose families are involved in education — whose parents organize and monitor their children's time, help with their homework, discuss school matters with them, read to them and are read to by them — tend to perform better academically than children whose families are not involved. They earn higher grades and test scores than their peers, attend school and complete homework more regularly, are better behaved, and are more likely to graduate from high school and attend college.

In 1998, the National PTA issued six standards for parent/family involvement programs — not only to guide program development, but to provide a means for evaluating program quality. Below each PTA program standard, I've added a few strategies for putting it into practice.

Standard 1: Communicating

Communication between home and school is regular, two-way, and meaningful.

- Distribute a newsletter to parents that contains tips for helping children learn and suggestions for family activities.
- Sponsor community events that encourage social interaction between teachers and parents.
- Create a parent handbook that offers positive and practical information about your school or program.
- Tell parents how and when to contact you.
- Provide ways for families to share their cultures, careers, and traditions with your students.

Standard 2: Parenting

Parenting skills are promoted and supported.

- Offer workshops on parenting skills.
- Host neighborhood meetings to help families understand the school, and you the school's families.
- Provide literacy and skills training for parents.
- Establish an accessible family information/resource center.

Standard 3: Student Learning

Parents play an integral role in assisting student learning.

- Create guide sheets to help parents build students' skills.
- Assign interactive homework.
- Involve parents in setting student goals and post-school objectives.
- Share your strategies for engaging parents in the educational process with colleagues. Encourage your principal to reserve time for this kind of dialogue.
- Establish a homework hotline.

Standard 4: Volunteering

Parents are welcome in the school, and their support and assistance are sought.

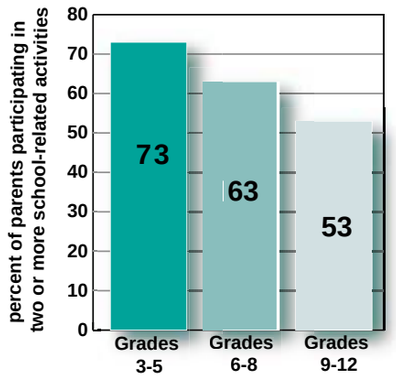
- Create a welcoming atmosphere for parents.
- Send a postcard to parents annually, asking them to identify their talents and interests.

Continued on page 3

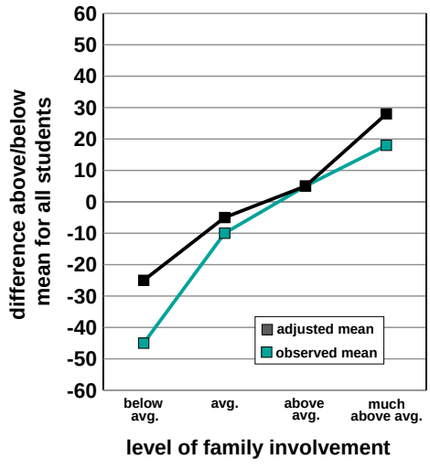
Factors over which parents exercise control — absenteeism, television viewing, reading materials in the home — account for nearly 90% of the difference in 8th-grade math scores.

— National Assessment of Educational Progress, 1994

Parent Participation in School



Relationship Between Family Involvement and 4th-grade NAEP Scores

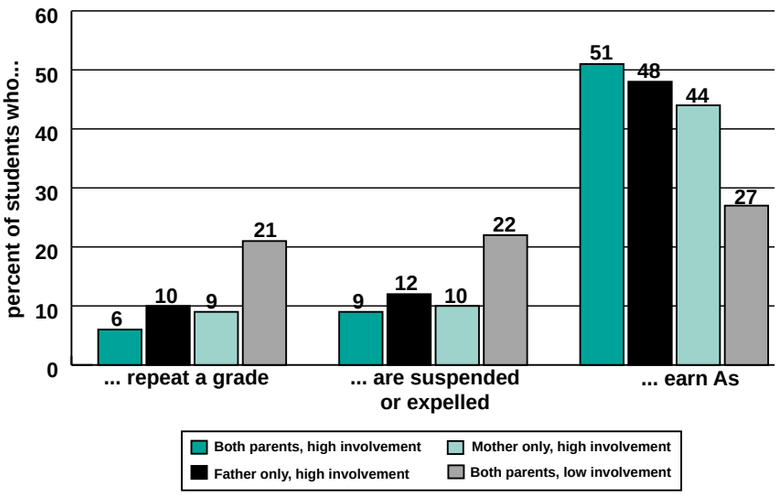


Student Success: A Family Affair

The benefits of involving parents in their children's education are not confined to the early years. Middle and high school students whose parents remain involved make better school transitions than students whose parents do not, maintain the quality of their work, and develop realistic plans for the future. And yet, despite its positive effects across grade and school level, parent participation dissipates as children age, and drops off precipitously once children transition to middle and high school.

The middle schools featured below and on page 3 have stymied this participation trend. Here administrators from both schools share their stories so you can do the same.

Parent Involvement and Student Achievement



We Are the Village

by Patricia A. Zavetz

As a child progresses through the education continuum, each stage throws not just the child into a new and strange arena but his or her family as well. Every new experience brings with it wonderment, excitement, accomplishment, and pride — but also discomfort and uncertainty.

In the Beginning

The elementary years are usually spent in a safe, heavily monitored environment with teachers known and trusted by the family; they take on the roles of mentor and parent as well as teacher. Personal relationships are built with the family, and exposure to other students and adults is minimal.

Meeting in the Middle

The second stage of the continuum usually brings with it a larger building, more students, and 4-7 teachers a day, each of whom sees, on average, 125 students. Middle school exposes students to peers from many backgrounds and with many experiences. Parents are typically as uncomfortable as students are excited and scared. And so middle schools bear a heavy responsibility — not just in teaching children but in forging relationships with families who are beginning to see their "babies" slip into adolescence. But how do we forge those relationships when the responsibilities and student bodies in middle school are so great?

Deer Park Middle Magnet School is extremely lucky to have very involved parents and a strong PTA. Our School Improvement Team regards the progression to middle school as one part of a larger cycle that must be tended to, and provides ample opportunities for parents to get comfortable with our school.

P³ Workshops

One such opportunity is the Perfect Parent Partnership Workshop, developed under principal Karen Barnes. At these Saturday morning sessions — held twice a year — parents sign up for three back-to-back workshops conducted by administrators, department chairpersons, and teachers. They choose among such topics as transitioning to middle and high school, understanding the IEP, and helping children with reading, writing, and math.

Successful Spin-offs

Our Student Achievement Task Force started as a spin-off of the workshops. This 20-member group (10 teachers, 10 parents) is charged with evaluating academic rigor, improving students' study habits, and monitoring student achievement. This partnership will be the driving force in "raising the bar" and helping our students reach their individual potential.

We've also begun a Dad's Club to encourage fathers' participation in their children's middle school experience. About 60 fathers are now involved in the program, which includes discussions, outings, and father-son activities.

Staffing for Results

We've added to our school a Volunteer Coordinator, who's done a fantastic job of enticing volunteers to come give us a try. Not surprisingly, most come back. We now have a cadre of 150-200 volunteers who give of their time throughout the year.

We're also working on establishing a "transitional" administrative position. While administrators usually move with their grades as they progress through middle school, we've decided to stay put, concentrating on our unique strengths.

Continued on next page

We Are the Village

Continued from previous page

Basically, we recognize that we weren't arbitrarily thrown together as a staff. As our principal built Deer Park's administrative team, she looked for certain individuals whose qualities would work well with others'. And that, we think, will benefit students more than shadowing them from grade to grade.

One of us is a "cross" (so to speak) between the elementary and middle school philosophies. She's the motherly influence so many students still need in school. Another is extremely effective with students in the "middle-child" position within the school community. The third is data driven and cognizant of the academic proficiency and maturity levels needed for high school. When middle school is completed, we think all students will have grown with our very specific kind of help.

Middle schools are the "village" in which students will develop academically, physically, socially — and we hope virtuously — as they move through their school careers. The middle school community can do so much to nurture and teach children, to build their character and provide them direction. But we must work in conjunction with the family to reach our shared goal — to shape thoughtful, effective citizens who will ultimately make the decisions that affect us all.

Pat Zavetz is assistant principal at Baltimore County's Deer Park Middle Magnet School, which hosted about 500 visiting parents during American Education Week 2001 — nearly 40% of its enrollment. She can be reached at 410-887-0726 or pzavetz@bcps.org.

Parent Participation: By the Numbers

72 Percentage of children aged 10-13 who said they'd like to talk to their parents more about school.

50 Percentage of children aged 14-17 who agreed.

40 Percentage of parents who say they're not dedicating enough time to their children's education.

89 Percentage of business executives who say lack of parental involvement is the leading obstacle to school reform.

98 Percentage of parents of 3rd-graders who say they have rules regarding homework completion.

53 Percentage of students 3rd-grade teachers rate "high" on completing homework.

National Standards

Continued from page 1

- Establish a school volunteer center.
- Create opportunities for volunteering beyond the school day.
- Ask parents to arrange worksite tours and job-shadowing opportunities.
- Open an after-school homework center.

Standard 5: Decision Making and Advocacy

Parents are full partners in the decisions that affect children and families.

- Provide understandable, accessible, well-publicized processes for influencing decisions, raising issues, and resolving problems.
- Seek out training in decision making and consensus building, facilitation, conflict resolution, and communication. Ask your principal to make these training opportunities available to you.
- Provide parents with up-to-date information on school policies, practices, and student/school performance.
- Encourage parent involvement in decisions affecting their children (e.g., placement, course selection, career planning, IEPs).
- Offer workshops on current issues related to the school or to education in general.

Standard 6: Collaborating with the Community

Community resources are used to strengthen schools, families, and student learning.

- Host community awareness events for families.
- Design lessons or create programs in which students render a service to the community.
- Encourage alumni participation in student programs and activities.
- Ask area employers to encourage parent involvement in school.
- Publicize school activities and accomplishments to the community.
- Avail yourself of community resources.

Maria Schaeffer is a specialist in family, school, and community involvement at the Maryland State Department of Education. She can be reached at mschaeff@msde.state.md.us or at 410-767-0296.

To order the National PTA's National Standards for Parent/Family Involvement Programs (1998), go to: http://www.pta.org/aboutpta/store/pi_standardsbooklet.asp.

For the full text of Maryland's Policy on Family Involvement, adopted last October by the State Board of Education, go to: http://www.msde.state.md.us/Special Reports and Data/policy_family_involvement.htm

Inviting Involvement

by Paul Dunford

The Mission

At Walkersville Middle School, we've made two-way, non-threatening communication the basis of effective parent involvement and one of our top priorities. Joining forces with the PTSA, we've actively promoted parent involvement in education — at school and at home — so much so that we've mobilized from asking one parent to serve (and rather passively at that) on the School Improvement Team to including parents on every decision-making committee in the school.

The Means

Several years ago, we realized we had to create an environment in which communication between home and school was useful and accessible, so we invested in the tools to make it happen: telephones in every classroom, staff voice mail and email, a weekly newsletter, and a school Web page. Homework and school notices can be accessed each day through the Web page or an automated telephone system. Our curriculum, policies, and procedures are available on the county's Web site, and we're in the process of creating an email system that will allow parents to check on their child's grades and progress at any given time in a term. And yet, as good as these tools are, they facilitate only one-way (school-to-parent) communication. That's not enough.

Participating

Over the years it took us to define our vision, goals, and organizational structure, we issued open invitations for parents to participate in the process. And we shared the structure, schedule, and progress of the school's decision-making groups through regular newsletters and community meetings.

To this day, parents are invited to join meetings and serve on committees, and we do our best to keep the volunteer rolls filled. We host all sorts of forums for staff and parents — from structured sessions to informal chats — to discuss our strengths and the areas in which we need to improve.

Empowering

But true parent involvement goes beyond an invitation to join in; parents must feel empowered to make a difference. We've found that getting three or more parents on a committee increases their sense of belonging and, in turn, their ability to make a difference. Following this three-or-more participation policy has helped us accomplish quite a bit — at first, simply changing the tone of a letter inviting parents to conference with teachers, but before long, actually changing the way those conferences are set up. We credit those changes with a conference attendance rate that's skyrocketed from 40% to 150%, necessitating additional conference days to meet parent demand.

Maintaining

Parents have changed the way Walkersville Middle operates, communicates, engages stakeholders, and is perceived by the community it serves. Just as importantly, parents feel genuinely welcome in our school. Yet despite these successes, our challenge to engage every family remains. So we're looking into the possibility of individualizing invitations to parents, defining expectations for the entire school community, and accommodating parents' schedules with more flexible meeting times.

Clearly, the ongoing and ever-changing conversation with parents — about teaching and learning and connecting — must never end.

Paul Dunford is principal of Walkersville Middle School in Frederick County. He can be reached at 240-236-4400.

There are no passengers on

Maryland Summer Center, Grasonville, Queen Anne's County
Independent study of periwinkle distribution at Horsehead Wetlands.

Environmental education is based on the belief that humans can live compatibly with nature and that people can make informed decisions that consider future generations. A good environmental education program changes the student who, in turn, changes the environment.

Environmental Education

Maryland's environmental education program, mandated K-12, is designed to help students create and maintain an optimal relationship with the environment and protect the state's unique natural resources, particularly the Chesapeake Bay and its watershed.

The program promotes environmental literacy, develops the critical-thinking and problem-solving skills students need to make responsible decisions about the environment, supports problem- and issues-based learning, and fosters cooperative and independent learning.

While environmental education's standards, objectives, and indicators are tied to the science and social studies content standards, the topics are easily integrated into the regular curriculum, and the lessons complement math, health, physical education, technology, the arts, and service learning.

Several local initiatives are making environmental education and its projects especially salient today.

- **The Chesapeake Bay 2000 Agreement**: Signed by Maryland, Pennsylvania, DC, and Virginia, the agreement calls for one meaningful Bay or stream experience for every student. Maryland's goal is to provide at least three — one apiece for elementary, middle, and high school students.

- **The SEER Report**: A study of 40+ schools nationwide[1], conducted by the State Education and Environment Roundtable, showed that integrated environmental education resulted in higher scores on standardized reading, writing, math, science, and social studies tests; reduced discipline and classroom management problems; increased enthusiasm for learning; and increased teacher satisfaction.

- **Smart Growth**: Governor Glendening's Smart Growth program provides a rich source of project ideas. At last October's Third Environmental Youth Summit, more than 600 high school students and their teachers met with local planners to learn about Smart Growth issues in their neighborhoods. A teacher's resource guide (consisting of maps, data, and background information) was unveiled at the summit and is now available on-line (see "What's the Plan?" below). In January, student government officers involved in the summit presented their Smart Growth activities at the national Urban Initiatives Conference in San Diego.

- **GPS/GIS**: MSDE is working with local colleges and universities to train teachers in global positioning systems (GPS) and geographical information systems (GIS) and their environmental project applications. Consequently, more teachers have started using GPS/GIS in such classroom projects as monitoring the placement of bluebird boxes to maximize use of nesting sites, investigating the environmental impact of a new road, collecting demographics to determine the placement of a new bike path, and documenting locations of endangered species.

- **Schoolyard Habitat Programs**: In lessons easily integrated with math, the arts, language arts, and science, students are planning, designing, and planting native species in a variety of schoolyard habitats — meadows, wetlands, forests, no-mow areas, and butterfly, native wildflower, and rain gardens.

- **Chesapeake Bay Trust**: Each year, the Trust provides hundreds of thousands of dollars in grants to schools and organizations. Grants of up to $1000 are available for such projects as tree planting, water-quality monitoring, wetland habitat enhancement, oyster gardening, and campus Bayscaping. Applications, instructions, resources, and project ideas are available at www.chesapeakebaytrust.org.

- **Maryland Summer Centers**: Among the Maryland Summer Centers' programs for gifted and talented students are a number of courses related to the environment. Program applications and descriptions for the 2003 summer cycle will be available in January at www.gcc.cc.md.us/math/sumcenters/index.html.

What's the Plan?

by Laura Frazier

The following is excerpted from Lesson 14 in "Where Do We Grow from Here? A Teachers' Resource Guide for Smart Growth Activities." For the full lesson plan — including core learning goals, materials, evaluation/assessment, and related resources — go to: http://dnrweb.dnr.state.md.us/smartgrowth/lesson14/lesson14.htm.

Objectives

By completing the following activities, the student will be able to:

- Identify how the human activities in Maryland have changed/evolved over the last 50 years.
- Identify the characteristics of planned development versus sprawl.
- Use maps to evaluate the geographic features of a land area.
- Explain the process by which land development practices involve public input and the role of both the county and state governments in that process.
- Explain the connection between land development and the environment.
- Evaluate a land planning document and prepare a fictitious planning document for a given area of land.

Background

Communities write comprehensive plans to guide future land use and physical development in a defined geographic area (such as a county or municipality) for a certain period of time, generally 20 years. Comprehensive plans include policy statements regarding the quantity, character, location, and rate of growth desired by the community, and guidelines for how to achieve these goals. In Maryland, comprehensive plans are required to address land use, transportation, community facilities, and mineral resources. Some comprehensive plans also address items such as community renewal, housing, flood control, and public utilities.

In 1992, Maryland passed the Economic Growth, Resource Protection, and Planning Act. The act requires local jurisdictions to address in their plans seven visions, or principles, to guide growth. The visions are:

1. Development is concentrated in suitable areas.
2. Sensitive areas are protected.
3. In rural areas, growth is directed to existing population centers, and resource areas are protected.
4. Stewardship of the Chesapeake Bay and the land is a universal ethic.
5. Conservation of resources, including a reduction in resource consumption, is practiced.
6. To assure the achievement of 1–5 above, economic growth is encouraged and regulatory mechanisms are streamlined.
7. Funding mechanisms are addressed to achieve these visions.

Comprehensive plans are produced with broad public input, and they are implemented through zoning regulations, which have the force of law.

Questions to ask ...

- What are the goals of the plan?
- Are there any important goals you feel are missing?
- What is the geographic area covered by the plan?
- What actions will the county take to ensure services are provided for future growth?
- What are key natural resources in the county?
- What actions will the county take to protect farmland, forests, and other natural areas?
- What are the major transportation issues facing the county? What actions will the county take to provide adequate transportation?
- What are the major housing issues facing the county? What actions will the county take to resolve them?
- Does the area include significant historic resources? What actions will the county take to preserve historic sites?
- What type of development does the county plan to encourage (e.g. residential, commercial, industrial)? How?
- Do you see any conflicts in the actions proposed in the Plan? If so, identify them.
- How does the county provide for public participation in the planning process?
- How will the plan be used in decision making?

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developer; historian; citizen activist).

- Develop interview questions.
- Conduct their interviews.
- Share their information with the rest of the class (p
  PowerPoint, posters, or slides).
- Proceed to Activity 2.

Activity 2: Creating Your Own Pla

Students form small groups of 3-5 and write a Master P
http://dnrweb.dnr.state.md.us/smartgrowth/lesson14/lesson
to consider the issues they have studied, the needs of the
mental concerns.

*Laura Frazier teaches chemistry and science methods at Walker
lauracfrazier@aol.com.*

Spaceship Earth. We are all crew. — Marshall McLuhan

- **Green Schools**: Seventy-seven schools have earned the Maryland Association of Environmental and Outdoor Education's green schools flag, awarded to schools that meet green standards. Go to www.maeoe.org for information. Also, MSDE's School Facilities Branch has put out *Conserving and Enhancing the Natural Environment: A Guide for Planning, Design, Construction, and Maintenance of New and Existing School Sites*. For your copy (free to public schools), call Kathy Kline at 410-767-0098.

- **Advanced Placement Environmental Science**: Students are being encouraged to add AP Environmental Science to their list of rigorous courses. The course is now offered in 16 school systems, up from just 9 last year. This summer, UMBC will host a College Board-approved AP Environmental Science workshop for teachers. Information is available from your guidance office.

- **Tundra Swans**: MSDE is working with the Department of Natural Resources on a project featuring Maryland's native tundra swans. Students track the swans' migration to northern Canada and back and investigate hypotheses proposed to explain the severe decline in Maryland's swan population. Go to www.msde.state.md.us/doi/tundra_swan.html for more information.

- **Environmental Education Web Site**: This new Web site, launched in November, links you to all the programs described here, as well as professional development opportunities, upcoming events, environmental research, career information, Maryland's outdoor environmental education centers, and additional classroom projects (including the recently posted "Cultivating a Wildflower Meadow" by Jennifer Maulfair and "Geographic Technologies" by Eric Cromwell). Go to www.msde.state.md.us/doi/index.html.

[1]*Lieberman & Hoody, Closing the Achievement Gap: Using the Environment as an Integrating Context for Learning, SEER, 1998. Get your copy of the executive summary by emailing your name and mailing address to rbell@msde.state.md.us.*

Piney Point, St. Mary's County

Above and below: Dredging for oysters with the Piney Point Aquaculture Center.

Piney Point, St. Mary's County

Watching a bald eagle fly over the water.

Piney Point, St. Mary's County

...vity 1: Reviewing A Plan

...a Master Plan or Small Area Plan produced by your county ...review in class. (Contact your planning office. A directory ...nning offices is available from the Maryland Municipal ...e.)

...udents, assigned to groups, to answer the questions at left. ...nts can be assigned several questions to research and report ...indings back to the class.

...esources to help them answer ...

...**ral Legacy** http://www.dnr.state.md.us/rurallegacy
...**eenPrint** http://www.dnr.state.md.us/greenways/greenprint
...**riculture** http://www.mda.state.md.us
...**nsportation** http://www.mdot.state.md.us
...**nomic development** http://www.dbed.state.md.us
...**toric sites** http://www.marylandhistoricaltrust.net

...o answer these questions, students should:
...Read the background materials from your district's planing ...office to identify key issues or questions they wish to ...explore.
...Identify a knowledgeable person to interview about local ...planning issues (e.g., representative from the local planning ...trict, or state agency involved in planning and development;

...resentations could be made orally, with visual aids such as

...an

...Plan for an imaginary town or county (see ...n14_1.htm for recommended content). Students will need ...district's residents and businesses, and various environ-

...rsville High School in Frederick County. She can be reached at

The Great Kapok Tree

by Leila Moses

The following activity is excerpted from "The Great Kapok Tree: Integrating Arts into the Curriculum." For the full lesson plan — including objectives, content standards, preparatory lessons, and extension activities — go to: http://www.msde.state.md.us/doi/index.html.

Introduction

Begin the activity by reading the poem "We are all Plooters" by Jack Prelutsky. Lead the students in a discussion about the poem's main idea — pollution — and encourage them to brainstorm types of pollution and places affected by it. Have students record their ideas in their journals and ask them to share their thoughts.

Review all of their thoughts but focus on those concerning trees/forests. Ask students to describe specific examples of pollution that can harm forests (forest fires, acid rain, deforestation).

Begin creating an environmental orchestra of rainforest sounds. Ask students to close their eyes and imagine the rainforest. ("As you picture this rainforest, what do you hear, what do you see, how do you feel?") While students brainstorm the sights, sounds, and feelings of the rainforest (rain dripping, monkeys swinging, birds chirping, heat/humidity), list their ideas on the board. As each new example is listed, encourage students to demonstrate it using their voices and bodies. Assign each example to a small group of students. As in an orchestra, use hand motions to conduct students in creating the rainforest sounds. Lift your arm to indicate crescendos and lower it to indicate diminuendos. Move both arms in a circular motion to indicate when to stop.

Day 1

1. Introduce the vocabulary for *The Great Kapok Tree*[1]: *ancestors*, *environment*, *generations*, *hesitated*, and *pollinate*.
2. Lead students on a story walk. Ask students to make predictions about the topic and to record them in their journals.
3. Reinforcing the setting of the story, encourage students to create an environmental orchestra of the rainforest by demonstrating the sound and/or motion assigned to them (see introduction above).
4. Begin reading the story. As their sights and sounds appear in the story, signal students to demonstrate them.

Continued on page 7

Shipley's Choice: Earth Friendly

The students, faculty, and parents at Shipley's Choice Elementary in Anne Arundel County work together every day to incorporate their respect for the natural environment into the school environment. Their environmental ethic — winning them Green School status last year — is incorporated into instruction and professional development, school operation and design, and community partnerships.

Curriculum and Instruction

The environment is an integral part of the instructional program at Shipley's Choice. Last year, each grade took on a specific environmental project that extended the science, math, language arts, or social studies curriculum.

Kindergarteners, for example, learned about animals and their habitats. Activities supporting the curriculum included a field trip to the National Zoo and a trip to Downs Park, bordering on the Chesapeake Bay, to see birds and ducks who make their home in and around the Bay and its tributaries.

First-graders, who study plants as part of the science program, learned about Bay grass restoration efforts by growing the grasses in the classroom. In partnership with the Chesapeake Bay Foundation and the Department of Natural Resources (DNR), the students measured and documented Bay grass growth under the different environmental conditions they created.

Second-graders, meanwhile, researched native Maryland bluebirds — their life cycle and habitat needs, and how that habitat in the Bay Watershed has diminished over time. In essays, students described their findings and recommended ways to improve conditions for the birds. The 2nd-graders also built bluebird boxes and located them along the Severn River Watershed.

In partnership with the local Garden Club and PTA, 3rd-graders planted drought-resistant Bayscape plants around the school property, consulting the DNR (www.dnr.state.md.us) and the U.S. Fish and Wildlife Service's Schoolyard Habitat Project Guide (www.fws.gov) to determine which plants would be ideal given the site's soil, average temperature, and moisture conditions.

Fourth-graders chipped in by growing yellow perch. Having carefully prepared fish tanks, they harvested the eggs, monitored and recorded fish growth, and ultimately released the fish into the Severn River.

Finally, as part of a long-term commitment to assessing water-quality conditions at two Severn River sites, 5th-graders, working with the Arlington Echo Outdoor Education Center (AEOEC), tracked and recorded water-quality data every month. The project illuminated the complex interrelationships among the Severn's water quality, dissolved oxygen, flora, and fauna. They also planted in the river the grasses grown by the 1st-graders.

This year, Shipley's Choice students researched bogs and wetlands before constructing a small, vegetated bog on school property. The bog is designed to reduce peak flow and pretreat water flowing to a Severn River tributary. (The tributary's water quality has been damaged by bank erosion occurring during storm water runoff.) The bog will also provide a habitat for many rare or threatened bog species, among them the Atlantic white cedar.

This project (see timeline above) was undertaken primarily by the school's 3rd-graders, who joined their teachers, more than a dozen parent volunteers, and AEOEC staff to build the bog. Second-graders helped them with the research and planting.

Date	Event
January – late February 2002	3rd-graders investigate Maryland wetlands and bogs. 2nd-graders study native Maryland plants.
February 2002	Finalize design and ensure compliance with all applicable government regulatory requirements.
April – May 2002	Construct bog; plant Atlantic white cedars nursery area and other native Maryland wetland species. Host dedication ceremony.
May 2002 – Ongoing	Observe and record developments in the bog habitat. Monitor water quality before and after construction.
May – August 2002	County starts work on a series of ponds designed to retain storm water flow from various community sources.

It all started when a team of experts from DNR, Maryland Department of the Environment (MDE), Chesapeake Bay Foundation, Chesapeake Bay Trust, and U.S. Fish and Wildlife Service surveyed and approved the bog location — a culvert-like, riprapped area of large rocks used to handle storm water runoff from the school's roof and property. This runoff flows into a small tributary of the Severn River watershed.

With a grant from the Chesapeake Bay Trust, an appropriation from MDE's Wetlands Mitigation Fund, and money budgeted by the school's PTA, Shipley's Choice contracted bog design and installation services.

This project complements a planned pond retrofit by Anne Arundel County for a shallow water wetland in the Shipley's Choice community. The storm water flow from the school's roof co-mingles with other flows directed to the same wetland area.

While this project is obviously beneficial to the environment, it is equally important for its benefits to students. Through hands-on research, planting, observation, and analysis, students will not only better understand wetlands' importance to Bay restoration efforts, they'll better appreciate the ways citizens can protect and restore their environment.

Professional Development

Of course, designing and implementing complex projects like these is no easy task. Teachers at Shipley's Choice have to keep a tight training and meeting schedule to stay abreast of the latest environmental issues. The school's 2000-01 professional development year-at-a-glance (below) shows how packed that schedule can be.

Continued on next page

Date	Professional Development Activity
June 2000	Faculty, administrators, and parents attend training at AEOEC. With Arlington Echo staff, teachers brainstorm ways to integrate environmental studies into their curricula.
Summer 2000	Teachers write curricula, extending the required learning outcomes with environmental studies.
	Faculty attends training on integrating environmental studies into each grade's math, social studies, and science curricula.
	Guidance counselors work with faculty to develop gifted & talented educational materials integrating environmental studies into the curriculum.
September 2000	Science chair attends AEOEC training on water-quality monitoring.
	First-grade teacher attends Chesapeake Bay Foundation training on growing Bay grasses.
Oct. '00 & Feb. '01	Shipley's Choice staff and parents meet to renew their commitment to environmental education and finalize curriculum integration activities for the 2000-01 school year.
December 2000	Environmental Committee — consisting of Shipley's Choice teachers, parents, and administrators — meets to track progress and discuss next steps.
	Fourth-grade teacher attends AEOEC training on growing yellow perch.
April 2001	Environmental Committee finalizes plans for Earth Day celebration.
Sept. '00 – May '01	Media specialist identifies literature with a Chesapeake Bay theme and weaves the literature into each grade's media curriculum.
	Media and technology specialists integrate technology into each grade's environmental studies curriculum and identify Web sites and other resources that help extend environmental studies into language arts, math, science, and social studies.

Shipley's Choice

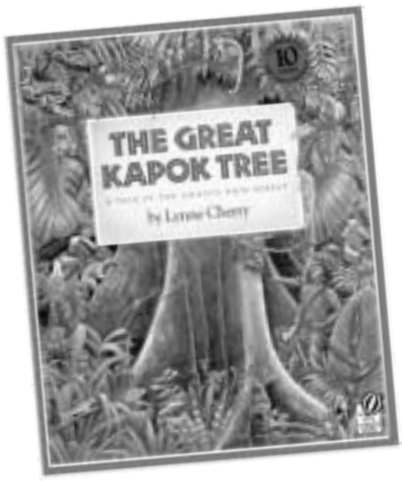
Continued from previous page

Community Partnerships

Shipley's Choice staff and parents are the first to admit that none of these projects would be possible without the strong commitment of their community partners. Arlington Echo actively supports the school's instructional and professional development objectives; the PTA deploys volunteers to every school-sponsored field trip and environmental project; the Chesapeake Bay Trust supplies necessary funding; and DNR, MDE, and the Chesapeake Bay Foundation provide the resources and expertise needed for successful project implementation.

In fact, nearly every community group gets tapped for project participation. The Shipley's Choice Homeowners Association; local Boy, Girl, and Cub Scout troops; and the Shipley's Choice Garden Club, among others, share in the school's mission and in its pride of accomplishment.

At Shipley's Choice, environmental awareness is not only infused into the curriculum and community, it's integral to the school itself. The school practices what it preaches, embracing best environmental management practices in building design and operation. The school tracks water usage, solid waste — even air emissions. None of this is easy, staff say, but every day they make a choice. And Shipley's Choice is earth friendly.



The Great Kapok Tree

Continued from page 5

5. Continue the story, assigning student volunteers to read aloud 2-3 paragraphs apiece.
6. Throughout the story, focus attention on the selection vocabulary. Briefly review their definitions and the use of the words in context.
7. Midway through the story, ask students to reevaluate their predictions. ("Was your prediction correct/incorrect? Why?")
8. As students continue reading, ask questions to check for comprehension. ("What happens after the logger goes to sleep? Who are the characters in the story? What do all of the characters' messages have in common?")
9. Ask students to predict what the logger will do when he wakes up. Have them discuss their predictions in a small group and record their thoughts in their journals.
10. As students read the end of the story, discuss their predictions.
11. Check again for comprehension, and review the story map (main idea, setting, characters, problem, events, and solution).
12. Give students 5-7 minutes to respond freely about the story in their journals.

Day 2

1. Begin the lesson by recreating the environmental orchestra.
2. Assign students a partner with whom to reread the story. As the pairs read, ask them to record each character and the message it conveys to the sleeping logger. When the class comes back together, have the students share the characters and their messages. Record the list of characters, in order of appearance.
3. Invite students to the drama area (an area designated for acting time) and, sitting with their partners, have them form a circle.
4. Wave a "magic wand" to transform the drama area into a rainforest.
5. While introducing each animal ("As we enter the forest, I begin to hear the sounds of monkeys, jaguars, snakes …"), cue students to recreate the environmental orchestra.
6. Begin reading the story aloud. Upon each character conveying its message to the logger, encourage all students to chant the story's refrain: "Do not cut down the tree. Do not cut down the tree. Do not cut down the tree."
7. Finish the story aloud.
8. Use the magic wand to transform the forest back into a classroom. ("We had a nice visit in the rainforest today. We'll come back tomorrow to see our friends …")
9. List each animal character from the story, again encouraging students to demonstrate their sounds and/or motions.
10. Invite students to share their thoughts on the use of creative drama. If time permits, students may write a free response in their journals.

Day 3

1. Invite students back to the drama area, and again transform it into the rainforest.
2. Review the list of characters in the story. Ask students to volunteer for each part. It's important to involve all students during an activity like this, but for all to take part, each animal will probably have to be represented by three or more students.
3. Once all students have been assigned parts, give them five minutes to discuss with the others playing the same role what message their character should say to the sleeping logger. The students should restate or summarize what their character said in the story.
4. Set the stage for the story using the environmental orchestra and begin reading an abridged version of the story. You will, in essence, become the narrator.
5. Have the student(s) assigned the role of the Great Kapok Tree stand in the middle. As you summarize the story, have each group of students approach the tree at the appropriate time and take on the character's part. For example:

   You say: "The logger was so tired he decided to take a nap."

   The student(s) playing the logger yawns, stretches, and lies down next to the tree.

   You say: "Soon, some monkeys swing by the tree and see the logger sleeping. They say to the logger …"

   The students playing monkeys approach the tree as if swinging on a vine and say what they rehearsed earlier. ("Please do not cut down this tree. This is our home. If you cut it down, we will have no place to live.")

6. After each group relays its message to the logger, encourage the whole class to chant as they did the day before. ("Do not cut down the tree. Do not cut down the tree.")
7. Conclude the lesson by transforming the forest back into a classroom.
8. Introduce the word *precious* to the students. Encourage students to record in their journals their thoughts about the word's meaning and share those thoughts in small groups.
9. Define the word *precious* and discuss what is precious to the animals.
10. After the students respond ("the tree"), discuss why it is so precious to each character.
11. Record their responses on chart paper.

Day 4

1. Give students 15 minutes to create a costume to wear while performing the story. Make available an assortment of fabrics, paper, scissors, glue, and props.
2. Transform the drama area into the rainforest, and, at this point, let students perform independently. Assist only if needed.
3. Have a student narrate an abridged version of the story, as you did on Day 3, while the other students perform their roles.
4. Transform the forest back into a classroom.
5. Discuss the performance with students. If time permits, have them perform it again, allowing students to switch characters.

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[1]*Cherry, L. (1990). The great kapok tree: A tale of the Amazon rain forest. San Diego: Harcourt Brace Jovanovich.*

Focused Feedback

Continued from page 1

- Students evaluate the usefulness, clarity, and internal consistency of the text's organizational structure.
- Students assess the adequacy, accuracy, and appropriateness of an author's details to support claims and assertions, noting instances of bias and stereotyping.
- Students evaluate text features to gain meaning.

Writing to Inform (grades 6-8)

- Students support all statements and claims with relevant anecdotes, descriptions, facts, statistics, and/or specific information.
- Students write reports for an intended audience that convey a clear and accurate perspective on the subject, and that support the main idea with facts, details, and explanations.
- Students write essays for an intended audience and purpose that state the thesis or purpose of the paper, that follow an organizational pattern, and that offer compelling evidence in the form of facts and details to support the thesis.

Preparation

To begin the unit, the teacher assessed prior knowledge and used several think-alouds, reading simple passages and modeling her thinking as she confronted different types of persuasion. Then student volunteers tried their hand at explaining their thinking aloud.

Next, students were asked to examine how the art and text in children's magazine advertisements were used to persuade, and to answer the following questions:

1. How does the text the advertisers used help persuade the consumer?
2. How do the pictures the advertisers used help persuade?
3. Do you think the advertisement is effective in persuading? Why or why not?

Rubric

4: This answer shows a thorough understanding of the advertisement with evidence of connections between the reader's ideas and the advertisement; the answer has references to text/art in support of inferences to the advertisement's effectiveness; responses indicate clear personal judgment with support.

3: This answer shows a good understanding and evidence of connections to the reader's ideas; the answer has references to text/art in support of inferences to the advertisement's effectiveness; responses indicate a personal judgment with some support.

2: This answer shows some surface understanding of persuasion; the answer has minimal references to text/art in support of inferences to the advertisement's effectiveness; responses indicate little personal judgment of effectiveness. [Re-teaching needed.]

1: This answer indicates there may be some understanding of the advertisement, but there is little evidence of constructing meaning (some unsupported inferences). [Re-teaching needed.]

0: No evidence of understanding. [Re-teaching needed.]

Maryland Classroom

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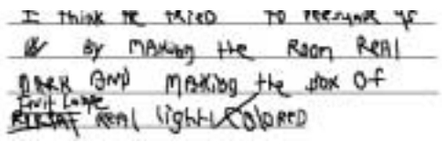
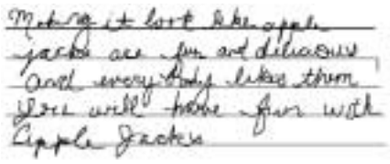
Responses & Feedback

Response A



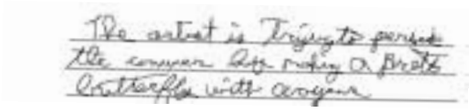
Feedback: You identified one aspect of the visual persuasive technique. Why do think that works? What can you say about the text? Was the ad effective? Why? Why not?

Response B



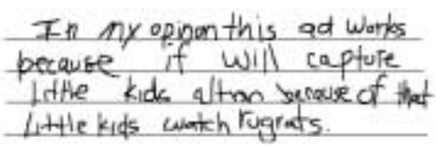
Feedback: Can you explain how the artist created the "fun" in the ad? How did the text add to the persuasion? Was the ad effective for you? Why? Why not?

Response C



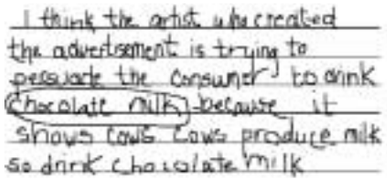
Feedback: Why do you think the author used a butterfly to persuade? How does the text support your thinking about the butterfly? Was the ad effective? Why? Why not?

Response D



Feedback: Good thinking on the concept of "capturing attention." What specific techniques does the picture use to capture attention? How does the text help? Was the ad effective? Why? Why not?

Response E



Feedback: Why do you think the author showed the cows producing chocolate milk? (You know they really don't do that!) How does the text support this approach? What can you say about the text? Did the ad work for you?

Results: What did the students' work show?

As she read through her students' responses, the teacher realized that no paper scored higher than a "2" and that she would, therefore, need to re-teach. While students showed a surface understanding of the criteria, they did not make connections between their ideas and the advertisements. In most cases, the students were not able to link the art and the text, and their responses did not indicate clear personal judgment with relevant or adequate support.

As she planned her next lessons, the teacher amended both her process and materials and was able to use some of the student work to model revision. She also taught her students something equally valuable: that they would be given time to master the knowledge and skills expected of them.

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